



Australian Government

Department of Education, Employment and Workplace Relations

FDFST5007A Evaluate sampling plans in relation to food industry standards

Release: 2

FDFEST5007A Evaluate sampling plans in relation to food industry standards

Modification History

April 2012: Minor typographical corrections.

Unit Descriptor

This unit covers the skills and knowledge required to interpret, apply and evaluate a sampling plan in relation to food industry standards.

Application of the Unit

This unit applies to food science and technology personnel who have roles in product design, quality assurance and production management. The unit typically applies to staff who have responsibility for maintaining product safety, quality and efficiency in food production through the sampling and testing of ingredients and product. The unit can apply to all sectors of food production including general food production, meat and seafood industries. The unit includes using knowledge of food science and processes to determine the required food safety and quality parameters, and the product sampling regime required for testing that parameters and standards have been met. Depending on the workplace application, liaison may be required with engineering and maintenance specialists.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the concept of sampling	1.1 The basis of selection of an appropriate sample size is established 1.2 The Acceptable Quality Level (AQL) is identified, in reference to sampling 1.3 The Operating Characteristic (OC) Curve is identified, in reference to sampling 1.4 Single/double sampling and its uses in the food manufacturing industry are assessed 1.5 Sampling tables are interpreted.
2. Interpret, apply and evaluate a sampling plan	2.1 Appropriate sample size is identified. 2.2 Appropriate Acceptable Quality Limit (AQL) is identified 2.3 Relevant sampling table is selected 2.4 Results are interpreted

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills include:

Ability to:

- establish the basis of selection of an appropriate sample size
- identify the Acceptable Quality Level (AQL) and the Operating Characteristic (OC) Curve
- assess single and double sampling and their uses in the food manufacturing industry
- interpret, apply and evaluate a sampling plan.

Required knowledge includes:

Knowledge of:

- acceptable Quality Limits
- operating Characteristics Curve
- single, double, sequential and multiple sampling plans
- sampling tables.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	A person who demonstrates competency in this unit must be able to interpret a sampling plan as part of quality processes in food production.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Critical aspects of assessment must include evidence of the ability to establish an appropriate sample size interpret sampling tables and analyse the results of sampling.
Context of and specific resources for assessment	Assessment of performance requirements in this unit should be undertaken within the context of food technology. Competency is demonstrated by performance of all stated criteria, including the critical aspects and knowledge and skills elaborated in the Evidence Guide, and within the scope as defined by the Range Statements applicable to the workplace environment. Assessment must occur in a real or simulated workplace where the assessee has access to: • Production process and related equipment, manufacturers' advice and operating procedures • Methods and related software systems as required for collecting data and calculating yields, efficiencies and material variances appropriate to production environment • Tests used to report relevant product/process information and recorded results.
Method of assessment	The following assessment methods are suggested: • Written and/or oral questioning to assess knowledge and understanding • Completing workplace documentation for a sampling plan • Third party reports from experienced practitioner • Case studies • Field Reports • Observation of candidate conducting a range of tests and procedures.
Guidance information for assessment	Evidence should be gathered over a period of time in a range of actual or simulated environments.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Regulations

- Australian and international standards
- Acts of Parliament
- Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labelling, weights and measures legislation and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.

Sampling requirements

Sampling requirements may include a range of sampling plans which apply to organisational, plant or field sites; different products or materials; a range of sampling points.

Sampling tools and equipment

Sampling tools and equipment may include personal protective equipment, sampling frames, sampling tubes, weighted sample bottles, variety of sterile containers, preservatives, automatic samplers, timers, refrigerated samples, composite and discrete samplers.

Unit Sector(s)

Technical.